

IN THE CLAIMS:

1 1. (Currently Amended) A method for manufacturing a magnetic structure on a
2 magnetic write head, comprising:
3 constructing a photoresist layer having a trench, the trench being formed with a
4 flared portion near the top of the trench;
5 depositing a magnetic material into the trench,;
6 removing the photoresist layer;
7 depositing a dielectric material;
8 performing a chemical mechanical polish to remove a portion of said dielectric
9 material;
10 performing a reactive ion mill procedure to remove a portion ~~sufficient amount~~ of
11 the dielectric material to expose said magnetic material.

1 2. (Original) A method as in claim 1 further comprising forming a magnetic
2 pole structure over the exposed magnetic material.

1 3. (Original) A method as in claim 1 wherein said constructing a photoresist
2 trench further comprises:
3 depositing photoresist; and
4 performing a deep ultraviolet photolithography on the photoresist.

- 1 4. (Original) A method as in claim 1, wherein said depositing said magnetic
2 material comprises electroplating.
- 1 5. (Original) A method as in claim 1, wherein said depositing said magnetic
2 material comprises electroplating said magnetic material, and terminating said
3 electroplating before said magnetic material reaches an upper opening in said
4 trench formed in said photoresist layer.
- 1 6. (Original) A method as in claim 1, wherein said trench includes a flared portion,
2 and wherein said depositing said magnetic material comprises electroplating said
3 magnetic material, and terminating said electroplating before said magnetic
4 material reaches said flared portion formed in said trench.
- 1 7 (Original) A method as in claim 1, wherein said magnetic material comprises
2 NiFe.
- 1 8. (Original) A method as in claim 2, wherein said magnetic pole structure
2 comprises NiFe.
- 1 9. (Currently amended) A method as in claim 1, wherein said reactive ion milling
2 procedure ~~is performed sufficiently to form~~ forms a recession of between 0 and
3 0.3 microns between said magnetic structure and an upper surface of said alumina.

- 1 10. (Original) A method as in claim 1 wherein said magnetic structure has a width
2 sigma of less than 10 nanometers.
- 1 11. (Cancelled)
- 1 12. (Original) A method as in claim 1 wherein said trench formed in said photoresist
2 layer has a width sigma of less than 10 nanometers up to a location where said
3 magnetic material deposition will terminate.
- 1 13. (Original) A method as in claim 1 wherein said dielectric material is alumina
2 (Al_2O_3).
- 1 14. (Original) A method as in claim 1 wherein said magnetic structure is a P3
2 pedestal of a magnetic pole.
- 1 15. (Original) A method as in claim 1 wherein said reactive ion mill is performed in
2 an atmosphere comprising CHF_3 .
- 1 16. (Original) A method as in claim 1 wherein said reactive ion mill is performed
2 sufficiently to create a recess between an upper surface of said magnetic structure
3 and an upper surface of said dielectric material.

1 17. (Currently amended) A method as in claim 1 wherein said reactive ion mill is
2 ~~performed sufficiently to create~~ creates a recess between an upper surface of said
3 magnetic layer and an upper surface of said dielectric layer wherein said recess is
4 between .1 and .3 microns inclusive.

1 18. (Currently amended) A method as in claim 1 wherein said reactive ion mill is
2 ~~performed sufficiently to create~~ creates a recess between an upper surface of said
3 magnetic layer and an upper surface of said dielectric layer wherein said recess is
4 about .3 microns.

1 19. (Withdrawn) A structure formed on a magnetic write head, comprising:
2 a magnetic structure having an upper surface and having first and second lateral
3 sides and having a width measured between said lateral sides and having a height
4 measured perpendicular thereto;
5 a dielectric layer contacting said first and second lateral sides of said magnetic
6 structure and extending laterally therefrom and having an upper surface; and
7 wherein
8 said upper surface of said dielectric layer is recessed from said upper surface of
9 said magnetic structure and said upper surface of said dielectric layer.

1 20. (Withdrawn) A structure as in claim 19 wherein said recess is between .1 and .5
2 microns.

- 1 21. (Withdrawn) A structure as in claim 19 wherein said recess is about .3 microns.